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Application No. 09/589,675

(amended) A device for irradiating tissue, comprising:

a fluorescent element positioned to receive pump radiation having a narrow spectral band and responsively generate emitted radiation, the emitted radiation having peak emission outside said narrow spectral band; and

a redirector for redirecting at least a portion of the emitted radiation toward a tissue

target.

7. (amended) A device for irradiating tissue, comprising:

a fluorescent element positioned to receive pump radiation and responsively generate emitted radiation, the emitted radiation having substantially different spectral characteristics with respect to the incident radiation; and

a redirector for redirecting at least a portion of the emitted radiation toward a tissue target, wherein the redirector comprises a waveguide including a reflective entrance face and reflective walls, the entrance face having a substantially transmissive aperture formed therein for admitting pump radiation into the waveguide.

2. (amended) A method for irradiating tissue, comprising the steps of:

directing pump radiation within a narrow spectral band onto a fluorescent element; responsively generating emitted radiation at the fluorescent element, the emitted

radiation having peak emission outside said narrow spectral band of the radiation;

receiving a portion of the emitted radiation at a redirector; and

redirecting the received portion of the emitted radiation toward a tissue target.

26. (amended) A method for irradiating tissue, comprising the steps of:

directing pump radiation onto a fluorescent element;

responsively generating emitted radiation at the fluorescent element, the emitted

radiation having spectral characteristics substantially different from the incident radiation;

receiving a portion of the emitted radiation at a redirector; and

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redirecting the received portion of the emitted radiation toward a tissue target, wherein the step of redirecting the emitted radiation includes reflecting the emitted radiation from the boundary between a waveguide core and cladding material, the cladding material having a substantially lower index of refraction than the waveguide core.

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3. (amended) A system for irradiating tissue, comprising:

- a pump radiation source for generating pump radiation having a narrow spectral band;
- a fluorescent element positioned to receive the pump radiation and responsively generate emitted radiation, the emitted radiation having peak emission outside said narrow spectral band; and
- a redirector for redirecting at least a portion of the emitted radiation toward a tissue target.